## Baby Monkeys Smile in Their Sleep

By Paige Towers • August 5, 2016 at 1:46pm

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Monkey see, monkey do. Monkey sleep, monkey...smile?

In a recent and potentially internetbreaking scientists from the in Japan observed seven newborn Japanese macaques napping. The baby monkeys were filmed in a room with no visual, auditory or tactile stimulation — i.e. no tickling. (Let me repeat: no monkeys were tickled during the making of this study.) The team later watched the videos in order to identify 'spontaneous smiles,' which are characterized as smilelike facial movements, like small lip corner raises, that occur during sleep.

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study, Primate Research Institute at Kyoto

## University

The scientists found that the wee monkey participants smiled 8.29 times on average during the average observation time of 44.05 minutes. Whether it was the youngest monkey at four days old, or the oldest at 18 days old, all of these spontaneous smiles occurred during REM sleep — never during nonREM

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sleep or waking stages. As for how long they held each little grin, the baby monkeys seemed to outdo their human counterparts in terms of speed. While infants have been recorded as holding sleepsmiles for an average of one second or or longer, the average duration of spontaneous smiles for the macaques is four times faster.

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Try watching this video on www.youtube.com, or enable JavaScript if it is disabled in your browser.

So is this just carefullymeasured cuteness, or is there something bigger going on here? Well, for starters, it's thus far been confirmed that humans, chimpanzees and now Japanese macaques exhibit spontaneous smiles. As stated in the study, considering the fact that these three species also exhibit social smiles and laughs as a way to communicate, it's possible that "spontaneous smiles may play an important role in emotional development as the origin of positive facial expressions."

The researchers, who called for much more research on macaques and other primates to determine what the function of spontaneous smiles are, also raised the question of whether the unconscious smiling relates to muscule devlopment. Could

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facial twitches that result in smilinglike facial expressions be a sign of the brain making connections with the body?

Dr. Mark Blumberg,

a researcher in the Department of Psychological and Brain Sciences at the University of Iowa, has been studying something similar: how sleep twitches

relate to the

development of connections between sensory input and motor output. These little microsecond facial twitches may be the baby monkey's brains figuring out which neurosignal creates which physical reaction — like a puppeteer pulling the strings.

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Sample pictures of spontaneous smiles in Japanese macaques/Kawakami, F., Tomonaga, M. & Suzuki, J. Primates (2016)

Furthermore, the study discussed how people have long theorized that babies smile in their sleep because they're just so damn happy

, or because they're reacting to pleasant dreams. Yet, there's no evidence to back up either theory: first, it's unknown whether macaques dream at all and, second, there's no research to support whether babies smile while unconscious in reaction to feelings of happiness or dreams. (What would be a happy dream for a baby anyway? The sight of a boob? Floating in a sea of pacifiers?)

11/10/2016 Baby Monkeys Smile in Their Sleep | Van Winkle's It's also been proposed that human infants and primates have spontaneous smiles because it's an evolutionary way to lock down their parents' love; if exhausted and grumpy parents' cold hearts melt a little each time their needy offspring throw precious sleepgrins their way, maybe they're less likely to abandon them or, you know, eat them.

Yet — and we apologize for busting up the fun here again — although the thought that sleepsmiling facilitates caregiving behavior gives us a nice, warm feeling, a 2012 study

using ultrasonography

found that fetuses actually smile in the womb. Considering that ain't no parent going to witness their fetus' smile, it's doubtful that baby's little lip raises are for us — although we'll certainly keep saying "ahhhhh" when we can.

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